

GOL'DENBLAT, I.I., doktor tekhn. nauk, prof., nauchnyy red.; BYKHOVSKIY, V.A., kand. tekhn. nauk, nauchnyy red.; MORSKOY, K.L., red. izd-va; GERASIMOVA, G.S., red. izd-va; NAUMOVA, G.D., tekhn. red.

[Lowering the cost and improving the quality of earthquakeproof construction] Snizhenie stoimosti i uluchshenie kachestva seismostoikogo stroitel'stva. Moskva, Gos. izd-vo lit-ry po stroit., arkhitekt. i stroit. materialam, 1961. 159 p. (MIRA 14:10)

1. Nauchno-tekhnicheskoye obshchestvo stroitel'noy industrii (for Gol'denblat, Bykhovskiy).
(Earthquakes and building)

BYKHOVSKIY, V.A., kand. tekhn. nauk[translator]; BUDARINA, E.M., red.
1zd-va; RUDAKOVA, N.I., tekhn. red.; SHERNEVA, N.V., tekhn.
red.

[Engineering analysis of the results of earthquakes in Japan
and the U.S.A.] Inzhenernyi analiz posledstviy zemletriasenii
v Iaponii i SSHA. Moskva, Gosstroizdat, 1961. 192 p.

(MIRA 16:1)

(Japan--Earthquakes)
(United States--Earthquakes)

KORCHINSKIY, I.L., prof.; POLYAKOV, S.V.; BYKHOVSKIY, V.A.; DUZINKEVICH, S.Yu.; PAVLYK, V.S.; BEGAK, B.A., red. izd-va; SHERSTNEVA, N.V., tekhn. red.

[Principles of designing buildings in earthquake districts] Osnovy proektirovaniia zdaniy v seismicheskikh raionakh; posobie dlia proektirovshchikov. Moskva, Gos. izd-vo lit-ry po stroit., arkhitekt. i stroit. materialam, 1961. 487 p.
(Earthquakes and building) (MIRA 14:12)

BYKHOVSKIY, V. A. *Doc Tech Sci* -- "Study of earthquakeproof
edifices and buildings on ~~scale~~ *the basis of physical* models." Mos, 1961. (Acad of
Struct ~~Build~~ and Architec USSR. Sci Res Inst of Concrete and ~~Reinfor~~ *Reinfor*
concrete "NIIZhB") (KL, 8-61, 239)
"

- 181 -
- 188 -

S/169/62/000/001/008/083
D228/D302

AUTHORS: Rykhovskiy, V. A., Korchinskiy, I. L. and Pavlyk, V. S.

TITLE: The earthquake of May 4, 1959, at the town of Petro-pavlovks-na-Kamchatke

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1962, 15-16, abstract 1A158 (Tr. Tsentr. n.-i. in-ta stroit. kon-struktsiy, Akad. str-va i arkhitekt. SSSR, no. 6, 1961, 5-38)

TEXT: The earthquake's epicenter was situated in the ocean at a distance of 170 km from the coast. The coordinates of the epicenter were 53°45'N and 161°E, the focal depth being 30 km. The (SBM) seismometer showed a deflection of 4.8 mm. More than 100 shocks with a force of 2 - 4 points were noted in the period from May 1 to July 1. The areas of strong damage are located in lowlying localities with a datum of from +10 to +20 m. The groundwaters stand relatively high in these districts. Considerable nature was noted, too, on dredged water-saturated ground. Buildings located

Card 1/2

The earthquake of May 4 ...

S/169/62/000/001/008/083
D228/D302

on rocky and semirocky ground were hardly damaged. The damage to small-block buildings was expressed by oblique cracks in the walls, partitions, and bulkheads. Assembled ceilings had small cracks in the joints between the floorings. In large-block buildings the damage was expressed by horizontal cracks in the joints between the partition blocks and by vertical cracks along the facets of window openings. Framework buildings endured the earthquake better. / Ab-
stractor's note: Complete translation. /

Card 2/2

BYKHOVSKIY, V.A.; GOL'DENBLAT, I.V.; KORCHINSKIY, I.L. (Moskva)

Building requirements for seismic stresses. Stroi.mekh.i rasch.soor.
3 no.2:11-16 '61. (MIRA 14:5)

(Earthquakes and building)

KORCHINSKIY, I.L., doktor tekhn.nauk, p rof.; BYKHOVSKIY, V.A., kand.tekhn.nauk.

"Structural designs and joints of large-panel buildings for seismic districts" by A.L. Churaian, Sh. A. Dzhabu. Reviewed by I.L. Korchinskii, V.A. Bykhovskii. Bet. 1 zhel.-bet. 8 no.5:244 My '62. (MIRA 15:6)

(Earthquakes and building)
(Churaian, A.L.) (Dzhabu, Sh.A.)

BYKHOVSKIY, V.A.; GOL'DENBLAT, I.I.; KORCHINSKIY, I.L.

Standardizing seismic loads; a note. Trudy TSNIISK no.18:205-
206 '62. (MIRA 16:2)

(Earthquakes and building)

DUZINKEVICH, S.Yu., red.; BYKHOVSKIY, V.A., red.; CHURAYAN, A.L., red.; PETROVA, V.V., red.izd-va; KOMAROVSKAYA, L.A., tekhn. red.

[Construction specifications and regulations] Stroitel'nye normy i pravila. Moskva, Gosstroizdat. Pt.2. Sec.A. ch.12. [Building in earthquake areas; standards of design] Stroitel'stvo v seismicheskikh raionakh; normy proektirovaniia (SNiP II-A. 12-62). 1963. 48 p. (MIRA 16:9)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Tsentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruktsey Akademii stroitel'stva i arkhitektury SSSR (for Bykhovskiy). 3. Institut stroitel'noy mekhaniki i seysmostoykosti AN Gruz.SSR (for Churayan). (Earthquakes and building)

BYKHOVSKIY, Viktor Arnol'dovich; KARAPETYAN, Boris Karapetovich;
MARTIROSYAN, O.A., otv. red.

[Bibliographical manual on engineering seismology and the
earthquake resistance of structures] Bibliograficheski
spravochnik po inzhenernoi seismologii i seismostoikosti
sooruzhenii. Erevan, Izd-vo AN Arm.SSR, 1964. 353 p.
(MIRA 17:12)

CHURAYAN, A.L.; BYKHOVSKIY, V.A.

Calculated seismic resistance of framed single-story industrial buildings. Prom. stroi. 42 no.1:21-22 '65. (MIRA 18:3)

1. Institut stroitel'noy mekhaniki i seysmostoykosti AN GruzSSR (for Churayan). 2. Tsentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy im. V.A. Kucherenko Gosstroya SSSR (for Bykhovskiy).

L 15637-65 KEO-2/ENG(j)/FSF(h)/FSS-2/ENG(r)/ENT(1)/FS(v)-3/EEC(k)-2/ENG(v)/
EWA(a)/EWB(a)/EWG(c) Pb-4/Po-4/Pe-5/Pq-4/Pac-4/Pae-2/Pl-4 AFTTC/AFMDC/ESD-3/
ESD(si)/AEDC(a)/BSD/AFETR/AMD/AFTC(a)/AFTC(b)/SSD TT(W)

ACCESSION NR: AP4049492

S/0020/64/159/002/0439/0441

AUTHOR: Delone, N. L.; Bykovskiy, V. F.; Antipov, V. V.

TITLE: The development of mitotic disruption in Tradescantia paludosa microspores under the influence of different flight duration on Vostok-5

SOURCE: AN SSSR. Doklady*, v. 159, no. 2, 1964, 439-441, and insert facing p. 440

TOPIC TAGS: spaceflight, Vostok-5, mitotic disruption, mitosis, weightlessness, microspore, Tradescantia paludosa

ABSTRACT: The microspores of Tradescantia paludosa were fixed at intervals of 1.5, 76, and 120 hr after the launching of Vostok-5 and at 3.5 following its landing. Five types of mitotic aberration (similar to the previous five types registered during the Vostok-4 flight) were noted. In type I, the nucleus remained at the periphery of the cell during prophase, followed by chromosomal nondisjunction during the subsequent mitotic phases. In type II, during prophase the nucleus migrated towards the center of the cell, followed by a

Card 1/2

L 15637-65

ACCESSION NR: AP4049492

rosette formation during metaphase and by nondisjunction. In type III, the spindle orientation in the test spores differed from that in the controls. In type IV, chromosomal nondisjunction and extended telophase occurred. In type V, multipolar mitoses occurred. The aberrations described do not occur exclusively in any given group of spores but rather are evenly distributed throughout the test groups. Orig. art. has: 5 figures.

ASSOCIATION: none

SUBMITTED: 27Feb64

ENCL: 00

SUB CODE: LS PH

NO REF SOV: 001

OTHER: 000

ATD PRESS: 3144

Card 2/2

S/195/60/001/003/006/013
B013/B058

AUTHORS: ~~Bykhovskiy~~, V. K., Temkin, O. N.

TITLE: On the Problem of the Mechanism of the Homogeneous Catalytic Activation of Monomolecular Hydrogen

PERIODICAL: Kinetika i kataliz, 1960, Vol. 1, No. 3, pp. 374 - 378

TEXT: With the aid of existing experimental material, the authors explained the problem of the mechanism of the homogeneous catalytic activation of molecular hydrogen with various catalysts. A transition state is suspected under participation of a loosening molecular orbit of the ligand (H_2) (dative bond). Some possible models of the transition state during the hydrogen activation were tested. The conception of the dominating significance of a donor-acceptor bond corresponds in the transition



state to the complex $H^+ \begin{array}{c} \diagup H \\ \diagdown H \end{array}$ or $H^+ \leftarrow H_2$. In this case the effects

Card 1/4

On the Problem of the Mechanism of the
Homogeneous Catalytic Activation of
Monomolecular Hydrogen

S/195/60/001/003/006/013
B013/B058

due to the possibility of a dative bond can be viewed on the following

models:  and  (dative bond with unpaired electron

or unshared electron pair respectively). In these particles bond energy and internuclear show a correlation with the order of bond (Table) so that certain conclusions may be drawn for complexes with unknown parameters, on the basis of the order of bond. The conditions of linkage, determined on models of transition complexes, confirm the supposition expressed and uncover a joint trend in the mechanism of activation of saturated and unsaturated molecules (H_2 , C_2H_2 , C_2H_4 etc.). This trend is tantamount to the participation of loosening molecular orbits, of the activated molecules and agrees with the experimental data on the reactions of these compounds. The proposed mechanism gives a satisfactory explanation for the difference in the catalytic activity of metal ions, for

Card 2/4

On the Problem of the Mechanism of the
Homogeneous Catalytic Activation of
Monomolecular Hydrogen

S/195/60/001/003/006/013
B013/B058

the effect of ligands as well as for the mechanism of activation
with particles of the type R^- , OH^- , NH_2^- etc. Thanks are expressed
to T. K. Rebane by the authors for discussing the study. Ya. K.
Syrkin and Kucherov are mentioned. There are 1 table and 28 refer-
ences: 12 Soviet, 8 US, 3 German, 1 Japanese, and 1 Swiss.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii
im. M. V. Lomonosova (Moscow Institute of Fine
Chemical Technology imeni M. V. Lomonosov).
Fiziko-khimicheskoy institut im. L. Ya. Karpova
(Physicochemical Institute imeni L. Ya. Karpov) ✓

SUBMITTED: March 12, 1960

Card 3/4

S/195/60/001/003/006/013
B013/B058

Ком- плекс 1)	Порядок связи, p 2)	Энергия связи, эв 3)	Межъядер- ное рассто- яние, Å 4)	Лите- ратура 5)
H ₂ ⁻	0	—	—	—
H ₂ ⁺	1/2	2,73	1,07	(11)
H ₂ ⁻	1/2	2,4	0,86	(11)*
H ₃	1/3	—	—	—
H ₃ ⁺	1	4,74	0,74	(11)
H ₃ ⁺	2/3	—	—	—

Legend to the Table: characteristics of the model-complexes.
1) complex; 2) order of bond; 3) bond energy, ev; 4) internuclear distance; 5) references.

Card 4/4

81583

5.3 D31

S/190/60/002/03/05/014
B020/B066

AUTHORS: Razuvayev, G. A., Minsker, K. S., Fedoseyeva, G. T.,
Bykhovskiy, V. K.

TITLE: Effect of Polar Additions on the Stereospecific
Polymerization of Propylene

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 3,
pp. 404-407

TEXT: The authors have recently shown that the addition of amines in the stereospecific polymerization and in the presence of a catalyst⁷ system (consisting of titanium chloride and triethyl aluminum) changes the degree of polymerization of polymers. The ratio of the fractions is not considerably influenced. The effect of other types of nucleophilic compounds containing an undivided electron pair that may interact both with the unoccupied 3-p level of the central Al atom in triethyl aluminum and with the d-shell of $TiCl_3$ is of special interest in this connection. It was presupposed that these compounds, like the amines

Card 1/3

Effect of Polar Additions on the
Stereospecific Polymerization of Propylene

81583

S/190/60/000/00/00/000
B020/R066

(Ref. 1), exert an influence upon the ratio of the reaction of growth to the interruption of the chain. Representatives of the class of ethers (dioxane), sulfides (diphenyl sulfide), and of the heterocyclic compounds (pyridine, thianthrene) were selected. The results of experiments on the effect of these compounds on the stereospecific polymerization of propylene are given (Table). With an increasing ratio between addition and titanium chloride also the molecular weight of the polymer increases as much as on application of amines. The maximum molecular weight found in dioxane with a ratio of < 1 between addition and titanium chloride is to be explained by the presence of two electron donor atoms in its molecule. Dioxane and pyridine accelerated stereospecific polymerization, which had not been expected by the authors (Fig.). The authors outlined (Ref. 1) the possibility of the formation of complex compounds between $TiCl_3$ and aniline, dimethyl aniline, and triethyl aniline in the presence or absence of triethyl aluminum. This may also be compared with the effect of the increasing molecular weight of the resultant polymer on polymerization of the Ziegler type and in the presence of ether additions. T. A. Domracheva

UH

Card 2/3

Effect of Polar Additions on the
Stereospecific Polymerization of Propylene

81583

S/190/60/002/03/05/014
B020/B066

contributed to the experimental part. Mention is made of C. D. Nenițescu (Ref. 3), A. V. Topchiyev and co-workers (Refs. 4,5), V. Michovich and M. Mikhaylovich (Ref. 12), T. V. Talalayeva and K. A. Kocheshkov (Ref. 8). There are 1 figure, 1 table, and 19 references: 10 Soviet, 8 US, 2 German, and 1 Rumanian. UH

SUBMITTED: December 11, 1959

Card 3/3

84509

S/190/60/002/004/010/020
B004/B056

15 0000 2109, 2209, 1372
5.4130 1156 only

AUTHORS: Bykhovskiy, V. K., Minsker, K. S.

TITLE: The Part Played by Electron Defects of the Surface in
Heterogeneous Catalytic Polymerization. I. Polymerization
of the Alfin Type //

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 4,
pp. 529-534

TEXT: The authors aimed at interpreting the mechanism of polymerization
in the presence of heterogeneous catalysts.¹ In the present paper, the
Alfin system (Refs. 1 and 2) (combination of alkyl chloride, secondary
alcohol, alkali metal, and olefin) is investigated. The authors point
out that the presence of alkali halide is important for polymerization
of this type, which is not explained by the interpretations given
hitherto of the process (Refs. 3-5). Proceeding from the data on the
activity of colored alkali halides (Refs. 7-12), they assume that in the
lattice of the alkali-halide crystal alkali atoms appear as impurities.

Card 1/3

84509

The Part Played by Electron Defects of the Surface in Heterogeneous Catalytic Polymerization. I. Polymerization of the Alfin Type

S/190/60/002/004/010/020
B004/B056

which ionize the lattice. In this way anion vacancies are produced, on which free electrons concentrate. These defects, which are described as color centers (F-centers) activate the accumulation reaction by weakening the π -bond of the monomer (Fig. 1). The Wurtz reaction $M + RX \rightarrow M^+X^- + M^+R^-$ demonstrates that the M^+ is adsorbed in the lattice, the carbanion R^- is localized on the anion vacancy, and forms an U'-center (according to Seitz, Refs. 8 and 9) (Fig. 2). The experimental ionization energy of F-centers is given in a Table for various alkali halides. Herefrom it follows that F-centers are stronger electron donors than the alkali metals themselves. Further, it is shown on the basis of Ref. 19 that the formation of stereo-regular polymers by means of Alfin catalysts depends on the presence of a solid phase, and that, by the addition of reagents that dissolve alkali halides or form complex compounds with them, amorphous polymers are produced. For the further clarification of this problem, the authors suggest the investigation of the optical and magnetic properties of colored halide crystals and of

Card 2/3

The Part Played by Electron Defects of the
Surface in Heterogeneous Catalytic
Polymerization. I. Polymerization of the
Alfin Type

84509
S/190/60/002/004/010/020
B004/B056

the effect of irradiation of such crystals. They thank G. A. Razuvayev, T. K. Rebanya, V. A. Kabanov, and A. A. Arest-Yakubovich for assistance and discussions. They mention a paper by S. Z. Roginskiy (Ref. 7). There are 2 figures, 1 table, and 21 references: 5 Soviet, 12 US, 2 British, and 2 German.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova
(Physicochemical Institute imeni L. Ya. Karpov)

SUBMITTED: December 31, 1959

Card 3/3

15.8000 2109, 2209, 1372

5.4130 1160 only

84510

S/190/60/002/004/011/020
B004/B056

AUTHORS: Minsker, K. S., Bykhovskiy, V. K.

TITLE: The Part Played by Electron Defects of the Surface in Heterogeneous Catalytic Polymerization. II. Systems of Catalysts of the Type Ziegler-Natta //

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 4, pp. 535-540

TEXT: The authors aimed at interpreting the mechanism of polymerization in the presence of heterogeneous catalysts. They assume that the catalytic activity of Ziegler and Natta catalysts depends upon the presence of doped crystals. These have electron defects of the type of a color center (F-center) on their surface. The appearance of such defects is illustrated by the chemical sorption of trialkyl aluminum on the ion lattice of $TiCl_3$ into which the cation Al^+R_2 is built. The positive charge causes an anion vacancy (hole), on which the carbanion R^- is localized (U'-center). If the crystal already has electron defects, or if

Card 1/3

The Part Played by Electron Defects of the
Surface in Heterogeneous Catalytic
Polymerization. II. Systems of Catalysts of the
Type Ziegler-Natta

84510

S/190/60/002/004/011/020
B004/B056

such defects are caused by irradiation, the chemical sorption of the metal alkyl will be facilitated. If a monomer with π -electrons approaches the R^- localized on the hole, the π -bond will be loosened under the action of an anion electron, and a σ -bond between anion and monomer may be produced. This interaction occurs with the participation of the loosening molecular orbits of the monomer and the corresponding orbits of the electron defect. The original anion becomes the end group; a new R^- - localized on the defect forms, which now has an extended carbon chain. On the basis of these assumptions, the authors give an interpretation of the polymerization mechanism with Ziegler and Natta catalysts. They thank G. A. Razuvaev, T. K. Rebanya, V. A. Kabanov, and A. A. Arest-Yakubovich for assistance and discussions. There are 31 references: 13 Soviet, 9 US, 2 British, 1 Belgian, 1 French, 3 German, and 1 Italian. X

Card 2/3

The Part Played by Electron Defects of the
Surface in Heterogeneous Catalytic
Polymerization. II. Systems of Catalysts of the
Type Ziegler-Natta

84510

S/190/60/002/004/011/020
B004/B056

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova
(Institute of Physics and Chemistry imeni L. Ya. Karpov)

SUBMITTED: December 31, 1959

Card 3/3

MINSKER, K.S.; BYKHOVSKIY, V.K.

Part played by the electron defects of the surface in heterogeneous catalytic polymerisation. Part 2: Systems of catalysts of the Ziegler - Natta type. Vysokom. soed. 2 no.4:535-540 Ap '60.

(MIRA 13:11)

1. Fiziko-khimicheskiy institut im.L.Ya.Karpova.
(Polymerization) (Catalysts)
(Crystals---Defects)

ACCESSION NR: AP4020922

S/0051/64/016/002/0201/0207

AUTHOR: By*khovskiy, V.K.; Nikitin, Ye. Ye.

TITLE: Nonadiabatic transitions in atom-molecule collisions. Quenching of the resonance fluorescence of mercury.

SOURCE: Optika i spektroskopiya, v.16, no.2: 1964, 201-207

TOPIC TAGS: nonadiabatic transition, atom-molecule collision, atomic collision, deactivation, fluorescence quenching, mercury, nitrogen, diatomic molecules

ABSTRACT: One of the most thoroughly studied processes of conversion of electronic energy to vibrational-translational energy is the energy exchange involved in quenching of the resonance fluorescence of the Hg atom, i.e., deactivation of the 3P_1 state to the 3P_0 state as a result of collision of the Hg atom with a molecule or other particle. Accordingly, calculation of the rate of the process is of interest from the standpoint of comparison with experimental data. The simplest case is that of collision with a diatomic molecule composed of identical atoms. In the present work there was calculated the rate of deactivation of the Hg 3P_1 state incident to collisions with N_2 type molecules. The nonadiabatic transition to the 3P_0 state is

Card 1/2

ACCESSION NR: AP020922

assumed to occur with intersection of the vibronic levels of the HgN_2 complex and to be accompanied by vibrational excitation of the N_2 molecule. The interaction energy is calculated by the Heitler-London method; the rate is evaluated with the aid of perturbation theory for nonadiabatic interaction. The final result is an expression for the rate constant k . The ranges of applicability of the expression for k are discussed in the light of the experimental data. "The authors are grateful to N.D.Sokolov for discussion of the work." Orig.art.has: 20 formulas and 1 table.

ASSOCIATION: none

SUBMITTED: 13Jun63

DATE ACQ: 02Apr64

ENCL: 00

SUB CODE: PH

NR REF SOV: 006

OTHER: 008

Card 2/2

1. 14758-65 EEC(b)-2/EPF(n)-2/EFA(s)-2/EWT(1)/EWT(n)/EWP(b)/EWP(t) Pt-10/

2u-4 IJP(c) WJ/JD/JG

ACCESSION NR: AP5000542

S/0051/64/017/006/0815/0820

AUTHORS: Nikitin, Ye. Ye.; Ey*khovskiy, V. R.

TITLE: Nonadiabatic transitions in atomic collisions. Quenching of resonant fluorescence of sodium vapor by argon

SOURCE: Optika i spektroskopiya, v. 17, no. 6, 1964, 815-820

TOPIC TAGS: atomic collision, nonadiabatic transition, luminescence quenching, spin orbit interaction

ABSTRACT: One of the aims of this investigation was to calculate the distribution of the energy released in quenching of resonance fluorescence over the various degrees of freedom of the reaction products. To this end, the authors calculate the cross section for the quenching of resonance fluorescence of sodium by thermal collision with argon atoms. It is shown that if the temperature is not too high the probability of non-adiabatic transition near the point

Card

1/2

L 14758-65

ACCESSION NR: AP5000542

of quasi-crossing of the terms $X^2\Sigma$ and $A^2\Pi$ is determined essentially by the spin-orbit interaction in the NaAr quasimolecule. The obtained theoretical cross section agrees with experiment provided the matrix element of the operator of spin orbit interaction between the states $X^2\Sigma$ and $A^2\Pi$ is of the order of $300\text{--}400\text{ cm}^{-1}$, which is approximately 20 times larger than the fine splitting in $\text{Na}(2p)$.

"The authors thank N. D. Sokolov for a discussion of the work."

Orig. art. has: 1 figure and 15 formulas.

ASSOCIATION: None

SUBMITTED: 25 Nov 63

SUB CODE: OP, NP

NR REF SOV: 005

ENCL: 00

OTHER: 008

Card

2/2

ACCESSION NR: AP4043654

S/0056/64/047/002/0750/0756

AUTHORS: By*khovskiy, V. K.; Nikitin, Ye. Ye.; Ovchinnikova, M. Ya.

TITLE: Probability of nonadiabatic transition near the turning point

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 750-756

TOPIC TAGS: nonadiabatic process, level transition, term crossing, atomic wave function, transition probability

ABSTRACT: It is demonstrated that the quasiclassical and quantum mechanical treatment are completely equivalent for the case of two linear electron terms connected by a constant interaction-matrix element. A general solution, even for only two coupled levels, has been obtained so far only for the case when the distance between the point of the term crossing and the turning point is sufficiently large, and this approximation frequently does not hold true for slow atomic collisions. Formulas are derived for the transition probability.

Card 1/2

ACCESSION NR: AP4043654

ity in different limiting cases, which cover a large range of variation of the characteristic parameters of the problem. The system of coupled wave equations is integrated numerically in the intermediate range of the characteristic parameters. The one-dimensional treatment given in the article can be directly generalized to the case of three-dimensional scattering in a central field. "The authors thank Professor N. D. Sokolov for discussions." Orig. art. has: 3 figures and 18 formulas.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR
(Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 10Mar64

ENCL: 00

SUB CODE: NP

NR REF SOV: 006

OTHER: 002

Card 2/2

L 52231-65 EFT(c)/EPA(w)-2/EWT(1)/EEC(t)/EPA(sp)-2 Pr-4/Pab-10/Feb AT

ACCESSION NR: AP5013910

UR/0056/65/048/005/1499/1507

AUTHOR: Bykhovskiy, V. K.; Nikitin, Ye. Ye.

TITLE: Charge exchange in collisions of multicharged ions

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 5, 1955, 1499-1507

TOPIC TAGS: charge exchange, collision charge exchange, multicharged ion, multicharged ion collision, charge exchange probability

ABSTRACT: Within the framework of the theory of nonstationary perturbations, the probability for charge exchange between multicharged ions ($A^{+2} + B \rightarrow A^+ + B^+$) is calculated in the two-level approximation and the approximation of the classical motion of nuclei for the case of Coulomb interaction in one of the channels ($A^+ + B^+$). Cross sections for charge exchange in collisions were calculated by finding approximate adiabatic electron wave functions for the two-atom system and by solving coupled Schroedinger equations for wave functions of the relative motion of nuclei or solving a system of time equations

Card 1/12

submitted: 22 Dec 64

L 52231-65

ACCESSION NR: AP5013910

in which account is taken of the interaction between adiabatic electron states induced by the motion of nuclei as well as the other terms disregarded in the Hamiltonian. In these equations, consideration is given only to the two terms between which the transition takes place. It is assumed that the motion of the nuclei is classical and that the trajectory of motion $R = R(+)$ is determined by the adiabatic potential. The time equations for transition amplitude are integrated numerically for a broad range of variations of the parameters of the problem (δ and γ). In cases when charge exchange (i.e., the transition between two adiabatic electron states) takes place at large interatomic distances R and is regarded as a single-electron process, the adiabatic functions are approximated by a linear combination of atomic orbits by introducing corrections accounting for the distortions of the atomic orbits in the field of another center into the preexponential factor of the orbits. The limits of applicability of the Landau-Zener formula are determined. Orig. art. has: 19 formulas and 3 figures. [JA]

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR
(Institute of Chemical Physics, Academy of Sciences SSSR)

Card 2/12

L 34062-66 EWT(1)/EWT(m)/ENP(t)/ETI IJP(c) JD/JG
 ACC NR: AR6017250 SOURCE CODE: UR/0058/65/000/012/D058/D059
 AUTHOR: Nikitin, Ye. Ye.; Bykhovskiy, V. K. 59
 TITLE: Nonadiabatic transitions in atom-molecule collisions. Quenching of resonance fluorescence of mercury 21
 SOURCE: Ref. zh. Fizika, Abs. 12D488
 REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 25-38
 TOPIC TAGS: mercury, resonance absorption, fluorescence, luminescence quenching, diatomic molecule, light excitation, spin orbit interaction, optic transition
 ABSTRACT: The authors investigated the mechanism of quenching of mercury by diatomic molecules, a mechanism connected with the vibrational excitation of the molecule of the quencher X. The surface potentials of the system $Hg(2P_1) + X_2(1\Sigma_g^+, h=0)$ are calculated with allowance of the spin-orbit interaction for the linear ($C_{\infty v}$), triangular (C_{2v}), and distorted triangular (C_{1n}) configurations. The method of the theory of transition state is used to calculate the probabilities of the nonadiabatic transition near the intersection of the potential-energy surfaces for different values of the resonance defect. Account is taken in the calculation of short-range exchange forces and of polarization interaction in the first order. [Translation of abstract]
 SUB CODE: 20

Cord 1/1 8

BYKHOVSKIY, V.M. (Yaroslavl')

Case of severe anaphylactic reaction to the administration of
bicillin-3. Klin.med. 40 no.6:142-143 Je '62. (MIRA 15:9)

1. Iz terapevticheskogo otdeleniya mediko-sanitarnoy chasti
(glavnyy vrach A.Ye. Leont'yev) Yaroslavskogo motornogo zavoda.
(ANAPHYLAXIS) (BICILLIN--TOXICOLOGY)

BYKHOVSKIY, V.Ya.

Composition of cobalamins formed in thermophilic methane
fermentation of the distilling industries waste. Vit. res.
i ikh isp. no.6:67-69 '63. (MIRA 17:1)

1. Institut biokhimi imeni A.N. Bakha AN SSSR, Moskva.

BUKIN, V.N.; PANTSKhAVA, Ye.S.; BYKHOVSKIY, V.Ya.; LOGOTKIN, I.S.;
KONDAKOVA, L.N.; KUZINA, O.M.

Using enriched media in the biosynthesis of vitamin B₁₂ by
methane-producing bacteria. Vit. res. i ikh isp. no.6:52-55
'63. (MIRA 17:1)

1. Institut biokhimi i imeni A.N. Bakha AN SSSR, Moskva,
TSentral'nyy institut fermentnoy i spirtovoy promyshlen-
nosti i Groznenskiy atsetonovyy zavod.

BYKHOVSKIY, V.Ya.; ZAYTSEVA, N.I.; MANTROVA, G.V.

Use of δ -aminolevulinic acid for vitamin B₁₂ biosynthesis
by resting cells of *Propionibacterium shermanii*. Dokl. AN
SSSR 157 no.3:692-695 J1 '64. (MIRA 17:7)

1. Institut biokhimii imeni A.N. Bakha AN SSSR. Predstavleno
akademikom A.I. Oparinyam.

BYKHOVSKIY, V.Ya.; KHLYSTOVA, Z.I.

Preparative production of crystalline vitamin B₁₂ from the
biomass of methane-producing bacteria. Vit. res. i ikh isp.
no.6:70-73 '63. (MIRA 17:1)

1. Institut biokhimii imeni A.N. Bakha AN SSSR, Moskva, i
eksperimental'naya laboratoriya Khimiko-farmatsevticheskogo
zavoda imeni L.Ya. Karpova.

BYKHOVSKIY, V.Ya.; PANTSKAYA, Ye.S.

Biosynthesis of vitamin B₁₂ by methane-producing bacteria. Vit. res.
i ikh isp. no.5:82-89 '61. (MIRA 15:1)

1. Institut biokhimii im. A.N.Bakha AN SSSR, Moskva.
(CYANOCOBALAMINE) (BACTERIA, METHANE-PRODUCING)
(DISTILLING INDUSTRIES__BY_PRODUCTS)

BUKIN, V.N.; MIKHLIN, E.D.; BYKHOVSKIY, V.Ya.; PANTSKAYA, Ye.S.; LOGOTKIN, I.S.

Producing vitamin B₁₂ by processing waste products of the distilling industry with thermophilic methane bacteria. Vit. res. i ikh isp. no.5:90-111 '61. (MIRA 15:1)

1. Institut biokhimii im. A.N.Bakha AN SSSR i Tsentral'nyy nauchno-issledovatel'skiy institut spirtovoy promyshlennosti, Moskva.

(CYANOCOBALAMINE) (BACTERIA, METHANE_PRODUCING)
(DISTILLING INDUSTRIES_BY_PRODUCTS)

ZAYTSEVA, G.N.; BELOZERSKIY, A.N.; BYKHOVSKIY, V.Ya.

Chemistry of Azotobacter. Report No.8: study of free amino acids and mononucleotides in Az. agile 22-D and their relation to the age of the culture and sources of nitrogen nutrition. Mikrobiologiya 28 no.5:675-682 S-O '59. (MIRA 13:2)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.

(AZOTOBACTER chem.)

(AMINO ACIDS chem.)

(NUCLEOSIDES AND NUCLEOTIDES chem.)

PANTSKHAVA, Ye.S.; BYKHOVSKIY, V.Ya.; KONDAKOVA, L.N.; ZARITSKAYA, E.K.;
KUZINA, O.M.

Intensifying the biosynthesis of vitamin B₁₂ by means of some
enriching additives. Ferment. i spirt. prom. 30 no.5:31-33 '64.
(MIRA 17:10)

1. Institut biokhimii imeni A.N. Bakha AN SSSR (for Pantskhava,
Bykhovskiy). 2. Groznenskiy atsetonovyy zavod (for Kondakova,
Zaritskaya, Kuzina).

PANTSKHAVA, Ye.S.; BYKHOVSKIY, V.Ia.

Biochemical and microbiological laws of the vitamin B₁₂ synthesis
in thermophilic methane fermentation. Prikl. biokhim. i mikrobiol.
1. no.1:37-44 Ja-F '65. (MIRA 18:5)

1. Institut biokhimii imeni Bakha AN SSSR, Moskva.

BYKHOVSKIY, V. Ye.

BYKHOVSKIY, V. Ye. "Monogenetic Trematodes, their System and Phylogeny."
Acad Sci USSR. Zoological Inst. Leningrad, 1956.
(Dissertation for Degree of Doctor in Biological
Science)

So: Knizhaya Letopis', No. 17, 1956.

TSVETKOV, V.N., dotsent, kand.tekhn.nauk; BYKHOVSKIY, Y.B., inzh.

Flexibility of glued soles. Izv.vys.ucheb.zav.; tekhn.leg.
prom. no.6:83-95 '59. (MIRA 13:5)

1. Moskovskiy tekhnologicheskii institut legkoy promyshlennosti.
Rekomendovana kafedroy tekhnologii obuvi.
(Shoe manufacture)

BYKHOVSKIY, Ya.

A progressive brigade. From.koop. 13 no.10:40 0 '59.
(MIRA 13:2)

(Abkhazia--Clothing industry)

Y Y
BYKHOVSKII, IA. L.

Vysokochastotnaia sviaz' po liniyam elektroperedach. [High frequency communication for electric transmission lines]. Moskva, Gos. energ. izd-vo, 1943, 16 p. diagrs.

"Spisok literatury": p. 162-164.

DLC: TK526L.B9

SO: SOVIET TRANSPORTATION AND COMMUNICATIONS, A BIBLIOGRAPHY, Library of Congress Reference Department, Washington, 1952, Unclassified.

BYKHIDVSKIY, YA. L.

Feb 1948

USSR/Electricity
Transmission Lines, High Voltage
Communications, Carrier Current

"Communications on the Electrical Transmission Lines
of the USSR Power Systems," Ya. L. Rykhovskiy, Candid-
date Tech Sci, 4 pp

"Klok Starts" No 2

High frequency transmission on power lines was first
started after World War I. Discusses technical fund-
amentals of high frequency channels on power lines,
operational and economical indicators of high fre-
quency communication along power lines, system used
for such transmissions, and brief data concerning

61911

Feb 1948

USSR/Electricity (Contd)

Manufacture of necessary transmission apparatus at
Factory of Ministry of Power Stations.

61911

BYKHOVSKI^y~~I~~^y, I. A. L.

Impul'snye izmereniia linii elektroperedach i elektrosviazi. [Impulse measurements of electric transmission and communication lines]. Moskva, Gos. energ. izd-vo, 1949. 71 p. diagrs.

Bibliography: p. [69].

DLC: TK381.B9

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference department, Washington, 1951, Unclassified.

BYKHOVSKIY, Ya. L.

PA 237741

USSR/Electronics - Combined Systems Jul 52
Carrier Telephony

"Long-Distance High-Frequency Telephone Communica-
tions Along Electric Power Transmission Lines,"
Cand Tech Sci I.K. Bobrovskaya, Ya. L. Bykhovskiy
and K.P. Yegorov and Engrs B.S. Klebanov, V. I.
Medvedev, and N. K. Myakochina

"Elektrichestvo" No 7, pp 41-46

Gives basic data for apparatus EPO-1 (single-side-
band, 84 one-way channels) designed for hf tele-
phony along power transmission lines. Work was
begun in 1945 by Central Sci Res Elec Eng Lab,

237741

and prototypes were developed, with participation
of this lab, by plant of Min of Commun Equip Ind
in conjunction with Chair of Long-Distance Commu-
nications of Elec Eng Inst of Commun imeni Bonch-Bruyevich.
Experimental samples of EPO-1 have been placed
in continuous operation. Submitted 19 Oct 51.

237741

BYKHOVSKIY, Ya. L. and MIKUTSKIY, G. V.

"Devices (Coupling Capacitors and Line-Tuning Units) for Connecting Carrier Equipment to Power Transmission Lines," *Avtomat. i Telemekh.*, 13, No.5, pp. 560-571, 1952

Discusses elements for connecting carrier equipment to power transmission lines with consideration for the mismatches caused by the necessity for transmitting a wide band of frequencies through high-voltage capacitors with low capacitance. Gives characteristics of type OFP-4 line-tuning unit and recommends measures to improve efficiency of units in connecting carrier equipment to 110, 220, and 400 kv transmission lines. Submitted 20 Aug 51

256T67

Central Sci-Res. Elec. Eng. Lab., Min. Elec. Power Stations.

BYKHOVSKIY, Ya. L.

1952 "Impulse Measurements of Lines Under Voltage," Elek. Sta., 23, No.3, pp. 45-46,

BIKHOVSKIY, Ya.L.

[Telephone communication over high-tension lines] Telefonnaia sviaz' po provodam linii vysokogo napriazhenia. Moskva, Gos. energ. izd-vo, 1953. 61 p.

(MIRA 6:10)

(Electric lines) (Telephone)

BURGSDORF, V.V., doktor tekhnicheskikh nauk; BYKHOVSKIY, Ya.L., kandidat tekhnicheskikh nauk.

Remote control of ice loads on electric transmission lines. Elek.sta. 24 no.
11:35-37 N '53. (MLRA 6:11)

(Electric lines--Overhead)

BYKHOVSKIY, Ya. L.

SHIMANSKIY, Yu.V., inzhener.

Remarks on V.V.Burgsdorf's and I.A.L.Bykhovskii's article "Remote control of ice loads on electric transmission lines." IU.V.Shiman-
skii. Elek.sta.26 no.3:59 F'55. (MLRA 8:1)
(Remote control)(Electric lines—Overhead)
(Burgsdorf, V.V.)(Bykhovskii, I.A.L.)

BYKHOVSKIY, YA. L.

AID P - 3456

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 23/32

Author : Bykhovskiy, Ya. L., Kand. of Tech. Sci.

Title : ~~High-frequency power-line carriers and microwave radio in power system operation (Review of foreign periodicals)~~
High-frequency power-line carriers and microwave radio in power system operation (Review of foreign periodicals)

Periodical : Elektrichestvo, 10, 74, 0 1955

Abstract : The author summarizes an article in Electrical Engineering, Ja 1955, pp. 49-52 on power-line carrier and microwave in power system operation.

Institution : None

Submitted : No date

BYKHOVESIY, Yakov Lazarevich; POPOV, Yu.A., nauchnyy redaktor; LYUBINSKAYA,
~~A.G., redaktor; KUZ'MIN, D.G., tekhnicheskiy redaktor.~~

[Telemechanics and its application] Telemekhanika i ee primeneniye.
Moskva, Vses.uchebno-pedagog.izd-vo Trudrezervizdat. 1956. 78 p.
(MLRA 10:5)

(Remote control)

Bykhovskiy, Ya. L.

SOV/112-58-1-986

Translation from: Referativnyy zhurnal, Elektrotehnika, 1958, Nr 1, p 146 (USSR)

AUTHOR: Bykhovskiy, Ya. L.

TITLE: Modern Carrier Channels on Electric Transmission Lines
(Sovremennyye vysokochastotnyye kanaly po liniyam elektroperedachi)

PERIODICAL: V sb.: Telemekhaniz. v nar. kh-ve, M., AS USSR, 1956, pp 85-96

ABSTRACT: A carrier link over electric transmission lines which is very reliable and economical has been used not only in the power systems but also in coal and metallurgical industries and in agriculture. Carrier links are used for telephony, telemechanics, and relay-protection blocking. The effect of ice, thunderstorms, and rain on the carrier-transmission reliability is examined. Costs of equipping carrier channels on 35-, 110-, and 220-kv lines are quoted. It is stated that power-cable attenuation is much higher than that of power overhead lines, and rapidly grows with frequency due to dielectric losses. Noise level on electric transmission lines due to corona on the conductors and partial discharges over the surface of insulators is, within a 5-kc band, 4.5

Card 1/2

SOV/112-58-1-986

Modern Carrier Channels on Electric Transmission Lines

napiers for 35- and 110-kv lines, and 2.5 napiers for 220-kv lines. Rain and humidity increase the noise level by 1.5-2 napiers. By and large, a 40-300 kc band is used for carrier transmission. For the most economical use of the frequency band and for high noise suppression, a single-sideband system is recommended; however, if a signal occupies only a narrow frequency band, AM and FM with transmission of carrier and both sidebands are permitted. This results in simpler, less expensive, and more reliable equipment. Block diagrams of carrier equipment TDO, TDO-400, TMD, TMP, TMVD, TMVP, and block diagrams of TMT tone-frequency telemechanical equipment are presented. There are 8 illustrations.

A. M. P.

AVAILABLE: Library of Congress

1. Communication systems--Meteorological factors
2. Communication systems--Costs
3. Communication systems--Performance
4. Transmission lines--Applications

Card 2/2

BYKHOVSKIY, Ya.L., kand.tekhn.nauk; MIKUTSKIY, G.V., kand.tekhn.nauk.

High-frequency parameters of the 220 kv. line of the Kama Hydro-
electric Power Station - Sverdlovsk. Elek.sta. 28 no.8:51-53
Ag '57.

(MIRA 10:10)

(Kama Hydroelectric Power Station)

BYKHOVSKIY, Ya. L.

High Frequency Channels on Power Transmission Lines in the Soviet Union

paper submitted for presentation at the Intl. Conf. on Large Electric Systems (CIGRE)
17th Biennial Session, Paris, France, 4-14 June 1958.

Electra, No. 30, Nov 57, periodical news letter issued by the CIGRE, Paris France.

BYKHOVSKIY, Ya.L., kand.tekhn.nauk; YEMBAYEV, M.F., red.; MODLIN, G.D.,
tekhn.red.

[High-frequency channels on the 400 kv. line from the Kuibyshev
Hydroelectric Power Station to Moscow] Vysokochastotnye kanaly po
linii 400 kv. Kuibyshevskaya GES - Moskva. Kuibyshev, Nauchno-
tekhn.ob-vo energ.promyshl., Kuibyshevskoe obl.provlenie, 1957.
18 p. (MIRA 11:6)

1. Tsentral'naya nauchno-issledovatel'skaya elektrotekhnicheskaya
laboratoriya Ministerstva elektrostantsiy (for Bykhovskiy)
(Telecommunication)

30V/107-58-11-10/40

AUTHOR: ~~Rykhovskiy, Ya.~~, Candidate of Technical Sciences, Chief of
the Communications Laboratory

TITLE: **Imeni** Lenin (Imeni Lenina) The Communications and
Telemechanics of the Volga Hydro-Electric Power Station
(Svyaz' i telemekhanika Volzhskoy GES)

PERIODICAL: Radio, 1958, Nr 11, pp 12-13 and p i of centerfold (USSR)

ABSTRACT: The laboratories of the All-Union Scientific Research Institute
for Electric Power Engineering of the Ministry of Electric
Power Stations of the USSR (VNIIE), together with various
other enterprises produced new equipment for communications,
telemechanics, and relay protection of the Volga Hydro-Electric
Power Station and its electric power lines which are the
largest in the world. The basic channels of communication
are the h-f channels running along the 400 kv power lines.
These h-f channels are described and illustrated in a structural
diagram which shows the h-f trap, the communications condenser,
the connecting filter and the line repeater. Telephone com-
munications are provided by EPO-400 apparatus working on a
system of transmission on single side band without carrier
band (OBP). The signals of the TNCh-56 telemetering devices

Card 1/2

SOV/107-58-11-10/40

In the Name of Lenin. The Communications and Telemechanics of the Volga Hydro-Electric Power Station.

are transmitted by a TMD/P-400 multi-channel apparatus, also working on the OBP system. The remote signal system is effected by UTR-55 and TDO-400 apparatus by shifting the carrier frequency to 100 cycles, which also provides direct telephone contact between adjacent electric power points. PVZ-400 transmitter-receivers, connected to the differential-phase protection panels, are used for the h-f line protection. A radio-relay line is being constructed from Moscow to the Volga GES on a 24-channel "Strela-M" apparatus. There are 6 photos and 1 diagram.

ASSOCIATION: VNIIE Ministerstva elektrostantsiy SSSR (All-Union Scientific Research Institute for Electric Power Engineering of the Ministry of Electric Power Stations of the USSR)

Card 2/2

BYKHOVSKIY, Ya., kand.tekhn.nauk

Communications and remote control at the Volga Hydroelectric Power
Station. Radio no.11:12-13,32a N '58. (MIRA 11:12)

1. Zaveduyushchiy laboratoriyey svyazi Vsesoyuznogo nauchno-issledo-
vatel'skogo instituta energetiki Ministerstva elektrostantsiy SSSR.
(Volga Hydroelectric Power Station)

BARKOV, V.Ye.; BYKHOVSKIY, Ya.L.; GRZHIBOVSKIY, V.V.; PAVLYCHEV, L.Ye.;
RABOTNOVA, K.A.; SOKOLOV, V.B.; SOLOV'YEV, P.N.; KHERSONSKIY,
D.S.; ZVENIGORODSKIY, I.S., red.; SAVEL'YEV, V.I., red.; BORUNOV,
N.I., tekhn.red.

[Safety rules in the construction and use of communication structures
and equipment] Pravila tekhniki bezopasnosti pri ekspluatatsii i
stroitel'stve sooruzhenii i ustroistv svyazi. Moskva, Gos.energ.
izd-vo, 1959. 103 p. (MIRA 13:4)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva elektro-
stantsiy. Tekhnicheskoye upravleniye. 2. Tekhnopravleniye Mi-
nisterstva elektrostantsiy (MES) (for Berkov). 3. Vsesoyuznyy
nauchno-issledovatel'skiy institut energetiki (VNIIE) (for Bykhovskiy,
Pavlychev, Sokolov). 4. Gosudarstvennyy trest po organizatsii i ratsio-
nalizatsii elektrostantsiy (ORGRES) (for Grzhibovskiy). 5. Leningrad-
skoye rayonnoye upravleniye energokhozyaystva (Lenenergo) (for Rabot-
nova). 6. Moskovskoye rayonnoye upravleniye energokhozyaystva (for
Solov'yev, Khersonskiy).

(Electric engineering--Safety measures)

(First aid in illness and injury)

MIKUTSKIY, Genrikh Vikent'yevich; BYKHOVSKIY, Ya.L., red.; LARIONOV, G.Ye.,
tekhn.red.

[High-frequency conduits for relay protection] Vysokochastotnye
kanaly releinoi zashchity. Moskva, Gos.energ.izd-vo, 1959. 271 p.
(MIRA 12:5)

(Electric conduits) (Electric power distribution)

KULIKOV, Valentin Vasil'yevich; BYKHOVSKIY, Ya.L., kand.tekhn.nauk, red.
VORONIN, K.P., tekhn.red.

[Assembling equipment for high-frequency channels on electric
lines] Montazh apparatury vysokochastotnykh kanalov po liniyam
elektroperedachi. Moskva, Gos.energ.izd-vo, 1959. 335 p.
(MIRA 12:12)

(Electric apparatus and appliances) (Electric lines)

BYKHOVSKIY, Ya.L., kand. tekhn. nauk; RAYNES, R.L., inzh.; SOKOLOV, V.B.,
inzh.

Selection of telemetering equipment. Elek sta. 30 no.2:76-77
F '59. (MIRA 12:3)
(Telemetering--Equipment and supplies)

16.9500 (1031, 1132)
9.8300

S/103/61/022/002/014/015
B019/B060

AUTHORS: Bykhovskiy, Ya. L., Izrailev, R. A., Mikutskiy, G. V.,
Skital'tsev, V. S., Sokolov, V. B. (Moscow)

TITLE: New studies on high-frequency channels in telemechanics

PERIODICAL: Avtomatika i telemekhanika, 22, no. 2, 1961, 263-270

TEXT: A report is made here on studies conducted at the VNIIE on high-frequency channels in telemechanics. The first part describes an acoustic device of the type ~~MT-7(MT-8)~~. This apparatus makes use of semiconductors and is intended for the multiplexing of conductor circuits of high-frequency channels of various transmission systems. The relation $f_n = 450 + 180(n-1)$ ($n = 1, \dots, 16$) holds for the 16 transmission frequencies. A narrow-band frequency modulation has been made use of to obtain a good noise-proof feature. The type described here differs from its predecessor by the use of semiconductors and in that emitter and receiver each have their own current feed. Figs. 1 and 2 show circuit diagrams of emitter and receiver. The second part of the present paper is devoted to high-frequency tele-

Card 1/4

89183

New studies on high-frequency ...

S/103/61/022/002/014/015
B019/B060

phone systems. The high-frequency systems for telephone and telemechanical communications are made of new elements and intended for information transmission over high- or medium voltage lines. They are also suited for relay protection and automation systems. The units are made of semi-conductors and miniature resistors, capacitors, and inductors, and require the use of output power tubes. The third part of the paper deals with remote switch systems. The purpose of such remote switch systems in power transmission systems is first explained, and it is stated that the transmission lines themselves can in most cases be used for the transmission of the switching signal. A two-frequency signal, a control frequency, and a signal frequency are regarded as the best suited. A diagram of the system concerned is discussed and shown to feature a filter for the suppression of noises having the frequency of the remote switch system. A power generating and transmission system is most conveniently controlled by controlling the phase in a central point of the whole system. The final part of the paper is devoted to the discussion of channels for the transmission of the phase relation within such a system, to the control unit. The system discussed is operated with a separate high-frequency

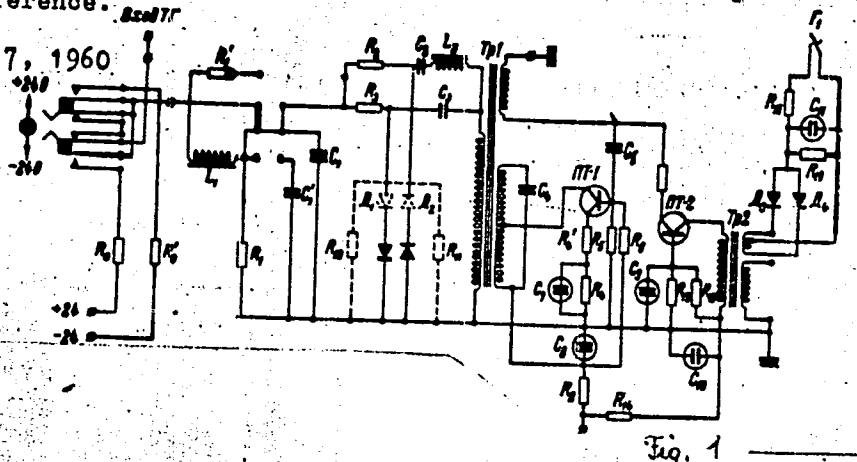
Card 2/4

New studies on high-frequency ...

S/103/61/022/002/014/015
B019/B060

channel over the transmission lines. The emitter consists of a crystal-controlled generator, a two-stage amplifier, a power amplifier, and an output filter. The emitter consists of an input amplifier with a high-frequency filter, a frequency converter, an intermediate filter, a discriminator, and a amplifier for industrial frequency. There are 9 figures and 1 Soviet-bloc reference.

SUBMITTED: May 7, 1960



Card 3/4

Fig. 1

89183

New studies on high-frequency ...

S/103/61/022/002/014/015
B019/B060

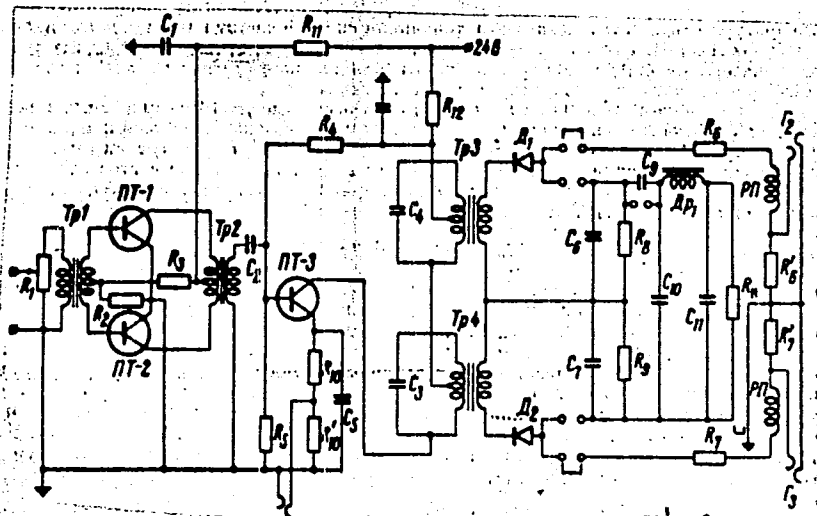


Fig. 2

Card 4/4

BYKHOVSKIY, Ya.L., kand.tekhn.nauk

Calculation of the stability of mobile high-frequency stations
using electric power transmission lines. Elek. sta. 32 no.11:
79-85 N '61. (MIRA 14:11)
(Electric power distribution--Communication systems)

BYKHOVSKIY, Yakov Lazarevich; MIKUTSKIY, G.V., red.; BUL'DYAYEV,
N.A., tekhn. red.

[Principles of the theory of high-frequency telecommunica-
tion using overhead power transmission lines] Osnovy teo-
rii vysokochastotnoi svyazi po liniyam elektroperedachi.
Moskva, Gosenergoizdat, 1963. 182 p. (MIRA 16:11)
(Telecommunication) (Electric lines--Overhead)

BOSYY, Nikolay Dmitriyevich, kand. tekhn. nauk. Prinimal uchastiye
BYKHOVSKIY, Ya.L., kand. tekhn. nauk; YAROSLAVSKIY, L.I.,
kand. tekhn. nauk; TKACHENKO, L.N., inzh., red.izd-va;
BEREZOVYY, V.N., tekhn. red.

[Communication channels] Kanaly sviasi. Kiev, Gostekhis-
dat USSR, 1963. 391 p. (MIRA 16:12)
(Information theory) (Telecommunication)

SMIRNOV, Boris Vasil'yevich, doktor tekhn. nauk; IL'IN, Anatoliy Afanas'yevich, kand. tekhn. nauk; BYKHOVSKIY, Ya.I., kand. tekhn. nauk, retsenzent; TKACHENKO, L.N., inzh., red.izd-va; STARODUB, T.A., tekhn. red.

[Signal transmission using electric distribution networks]
Peredacha signalov po raspredelitel'nyh elektricheskim setiam; osnovy teorii i rascheta. Kiev, Gos.izd-vo tekhn. lit-ry USSR, 1963. 422p. (MIRA 17:1)

BYKHOVSKIY, Ya.L., kand.tekhn.nauk

Use of lightning grounding wires of power transmission lines for information transmission. Elek. sta. 34 no.11:76-79 N '63. (MIRA 172)

BYKHOVSKIY, Ya.L., kand.tekhn.nauk

Design norms of high-frequency channels using electric power
transmission lines. Trudy VNIIE no.7:216-219 '58. (MIRA 16:12)

BYKHOVSKIY, Ya.L., kand. tekhn. nauk

Present conditions and future development of communications in electric power systems. Trudy VNIIE no.12:4-13 '61. (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektroenergetiki.

IL'IN, Anatoliy Afanas'yevich; PELIPENKO, Viktor Nikolayevich; SHULIN,
N.I., retsenzent; GUZOV, E.S., retsenzent; BYKHOVSKIY, Ya.L., otv.
red.

[Dispatcher communication using the contact network in
mines] Dispetcherskaia svlaz' po kontaktnoi seti rudnikov.
Moskva, Nedra, 1964. 163 p. (MIRA 18:3)

BYKHOVSKIY, Ya.L., kand. tekhn. nauk; SEDEL'NIKOV, V.V., kand. tekhn. nauk

Prospects for high-frequency communication systems using 750 kv.
power transmission lines. Elek. sta. 35 no.6:63-65 Je '64.

(MIRA 18:1)

L 5411-66 EWT(d)/EWT(1)/EWA(h)

ACC NR: AP5024977

SOURCE CODE: UR/0286/65/000/016/0042/0042

INVENTOR: Bykhovskiy, Ya. L. ³⁵

ORG: none

TITLE: System for reducing noise during information transmission over power transmission lines. Class 21, No. 173798 ^{0.44} ⁴⁶ ¹³

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 42

TOPIC TAGS: data transmission, transmission line, noise jamming ^{25,55}

ABSTRACT: This Author Certificate introduces a device for reducing noise during information transmission over power transmission lines, where the noise level depends on instantaneous values of voltage at industrial frequencies. In order to assure information transmission only in periods of minimum noise, a memory unit and a computing unit are installed at the transmitting end. A switch and an industrial-frequency unit which regulates pulse widths in synchronism with the transmitting unit are installed at the receiving end. The pulses control the operation of the switch. Orig. art. has: 1 figure. [JR]

SUB CODE: EFW/ SUBM DATE: 14May63/ ORIG REF: 000/ OTH REF: 000/ ATD PRESS: 4/3/

Card 1/1

UDC: 621.316.94

BELYAYEV, A.I., otv. red.; BYKHOVSKIY, Yu.A., red.; VELLER, R.L., red.
[deceased]; GREYVER, N.S., red.; KLUSHIN, D.N., red.; OL'KHGV,
N.P., red.[deceased]; RUMYANTSEV, M.V., red.; SAZHIN, N.P.,
red.; STRIGIN, I.A., red.; TROITSKIY, A.V., red.; KAMAYEVA, O.M.,
red. izd-va; LUTSKAYA, G.A., red. izd-va; VAYNSHTEYN, Ye.B.,
tekhn. red.

[Principles of metallurgy in 4 volumes]Osnovy metallurgii v 4
tomakh. Red.kollegiia: IU.A.Bykhovskii i dr. Moskva, Metal-
lurgizdat. Vol.3.[Light metals]Legkie metally. Otv.red.A.I.
Beliaev i N.S.Greiver. 1963. 519 p. (MIRA 16:2)
(Light metals)

BYKHOVSKIY, Yu.I.

Increasing the stability of standard measuring air capacitors.

Trudy VNIIM no.14:118-133 '53.

(MIRA 11:6)

(Condensers (Electricity)--Standards)

BYKHOVSKIY, YU. A.																									
COMMON ELEMENTS													PROCEDURES AND PROPERTIES INDEX												
<p>Reverberatory furnaces of the Balkhash smelter and how to improve their efficiency. P. G. Egorov and Yu. A. Bykhovskii. <i>Tsvetnye Met.</i> 20, No. 6, 41-51 (1947). M. H.</p>																									
<p>ASH-11A METALLURGICAL LITERATURE CLASSIFICATION</p>																									
SIGNATURE													SIGNATURE												
DATE													DATE												

BYKHOVSKIY, Yu. A.

2687. MEDIUM PRESSURE BURNERS FOR MODERN FURNACE OILS. Rafalovich, I. M., Bykhovskii, Yu. A. and Zabereshnyi, I. I. (Za. Ekon. Topliva (Fuel Econ.), Dec. 1950, 9-12).

An illustrated description is given of modifications of burners used in copper ~~smelting~~ furnaces and burning 400 k.g. per hour of oil with an Engler viscosity of 5-6° at 90°C. (L).

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

BYKHOVSKIY, Yu. A.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 519 - I

BOOK

Call No.: TN677.R23

Authors: BUROVOY, I. A., BYKHOVSKIY, Yu. A., ZABEREZHNYI, I. I. and RAFALOVICH, I. M.

Full Title: EXPERIENCE WITH AUTOMATIC CONTROL OF TEMPERATURE IN REVERBERATORY
COPPER-SMELTING FURNACES

Transliterated Title: Opyt avtomatizatsii teplovogo rezhima otrazhatel'nykh mede-
plavil'nykh pechey

PUBLISHING DATA

Originating Agency: None

Publishing House: State Scientific and Technical Publishing House of Literature on
Ferrous and Nonferrous Metallurgy (Metallurgizdat)

Date: 1953 No. pp.: 328 No. of copies 3,000

Editorial Staff

Scientific Editor: Rafalovich, I. M., Prof. Dr. of Tech. Sci.

Editor: Charikhov, L. A., Eng., Appraiser: Lisovskiy, D. I.

Prof. Dr. of Tech. Sci.

PURPOSE: The book is intended for engineers and technicians dealing with controlling
and measuring instruments and with automation, as well as for technologists in
copper-smelting plants, scientific workers in design and research institutes, and
students of metallurgical and technical schools.

TEXT DATA

Coverage: This book describes the methods of furnace investigation and preparation
for automatic temperature control under various industrial conditions. It gives

Opyt avtomatizatsii teplovogo rezhima otrazhatel'nykh

AID 519 - I

data on special features of the installation of automatic devices in copper-smelting shops, on the results of the analysis of individual elements of control, and on the adjusting of automatic furnaces to the most favorable temperature. It contains information on the efficiency of the automation of reverberatory and refining copper-smelting furnaces. According to the authors, experiments in the automation of copper-smelting furnaces started in the USSR in 1949, and were completed in early 1952. Three reverberatory and two refining furnaces of the four leading Soviet copper smelteries (see "Facilities") were the first to be controlled automatically. The book is provided with schematic drawings of furnaces and various devices, and tables and diagrams. The appendix contains instructions on automatic control of furnaces for smelters and foremen. No. of References: 18 Russian, 1939-1952

Facilities: Engineers, technicians and workers of Kirovgrad, Krasnoural'sk, Balkhash and Pyshma Copper Smelteries; staff of the Moscow and Sverdlovsk Branches of the Instrument Design, Installation and Adjustment Organization (Proyektmontazhpribor); I. A. Strigin, Director of the State Scientific Research Institute of Nonferrous Metals (Gintsvetmet), D. M. Yukhtanov, assistant chief, and Gintsvetmet scientific workers.

BYKHOVSKIY, Yu.A.

Determining the true temperature of a melt using an optical pyrometer.
TSvet.met. 26 no.4:27-31 J1-Ag '53. (MIRA 10:10)

1. Gintsvetmet.
(Copper--Metallurgy) (Temperature--Measurement) (Pyrometry)

BYKHOVSKIY, YU. A.

Rafalovich, I. M., Burovoy, I. I., Bykhovskiy, Yu. A., and Zaberezhnyy I. I.,
"Development and Installation of Automatic Regulation of Heat Con-
ditions in Reverberatory and Refining Furnaces," in the book Oboga-
shcheniye i metallurgiya tsvetnykh metallov / Enrichment and Metallurgy
of Non-ferrous Metals, (Collection of Scientific Works No 8), Moscow,
1953, Metallurgizdat, Pages 64-87, 15 figures, 2 tables (Gintsvetnet).

BYKOVSKIY, Yu. A.
KIKOIN, I.K.; BYKOVSKIY, Yu. A.

Transversal photomagnetic effect in n- and p-germanium. Izv. AN
SSSR. Ser. fiz. 21 no.6:801 Je '57. (MLRA 10:8)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Magnetism) (Ferromagnetism)

137-58-6-11958

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 110 (USSR)

AUTHOR: Bykhovskiy, Yu. A.

TITLE: Improvement of Control and Monitoring Methods in Converter Treatment of Copper Matte (Uluchsheniye metodov upravleniya i kontrolya protsessa konvertirovaniya mednykh shteynov)

PERIODICAL: Sb. nauchn. tr. Gos. n.-i. in-ta tsvetn. met., 1957, Nr 13, pp 268-288

ABSTRACT: A presentation of the results of an investigation of the functioning of a converter carried out to determine the feasibility of automation of the process. A method of continuous temperature control and a method of regulating gas pressure in the dust catcher to ensure the SO₂ content in the gas required by the sulfuric-acid plant and to maintain standard health conditions at the work area have been worked out. A spectroscopic method for determining the end of the first period of blow (to white metal) and the end of blow for blister copper by the appearance of the Cu line and the disappearance of the S lines in the gas spectrum has been developed. A need for mechanizing flux and cold-additive feed has been found and is being met; it is also found necessary

Card 1/2

137-58-6-11958

Improvement of Control (cont.)

to mechanize tuyere cleaning for successful automatic regulation of converter operation.

A.P.

1. Copper ores--Processing
2. Particles (Airborne)--Monitoring equipment
3. Control systems--Applications
4. Spectographic analysis--Applications

Card 2/2

SOV/136-58-5-5/22

AUTHORS: Bykhovskiy, Yu. A. and Polyakova, V.V., Bagdasarov, V.A., Kazakov, A.S. and Sarkisyan, A.M.

TITLE: Converter Automation, Utilisation of Converter Gases and Application of a Spectroscope Method for Controlling the Bessemerisation Process (Avtomatizatsiya konverterov; ispol'zovaniye konverternykh gazov i primeneniye spektral'nogo metoda kontrolya protsessa Bessemerovaniya)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 5, pp 28 - 34 (USSR)

ABSTRACT: At the Alaverdi Copper-chemical Combine, the productivity of converter operation and of the sulphuric-acid plant and converter campaign life were increased in 1957 by introducing automatic control and rapid analytical methods. The authors hope their description of the methods and their development will be useful to other combines. In addition to the authors, the following participated in the work: from the Alaverdi Combine -- Sakhanskiy, Zarapov, Bezhanov, Arutyunyan, Davtyan, Kortava, Teofanov, Tumanyan and other; from Gintsvetmet - Rodionova, Kuznetsov and Olevanov; from the TsPKB of the Proyektmontazhavtomatika (now Giprotsvetmet) -- Rozendor, Averbukh and Finger; from Kavtoplokontrol' - Dzodtsoyev, Kapysitskiy and Vishnevskiy. The authors

Card1/3

SOV/136-58-5-5/22

Converter Automation, Utilisation of Converter Gases and Application of a Spectroscope Method for Controlling the Bessemerisation Process

describe first the automation of converters with details of the instruments and a circuit diagram (Figure 1). The component parts of the system are units for automatic regulation of gas pressure in the dust-catcher, for automatic control of blast flow rate and pressure, for protecting tuyeres from filling with liquid metal in the event of blast pressure falling below the safe value, for continuous temperature measurement in the converter (Figure 2) and a series of alarm signals. The spectroscopic analytical method adopted was developed after a special investigation in which the continuous flame spectrum was photographed and also studied visually. For determining the readiness of white matte, a pocket spectroscope is now used, the method being based on the appearance of two narrow lines (in the region 5400 and 5700 Å). For controlling the end of the bessemerisation process, the relation between the SO₂ content

of the exit gases and the state of the process is used. Card2/3 observations being made with a steeloscope. The results